

**University of Illinois Department of
Agricultural Engineering
BESS Lab**

Project Number: 98169

Test Date: September 29, 1998

Fan

Make: Acme

Model #: DDPS50K-C

Manufacturer: Acme

Blade Size: 50"

Orifice Dia.: 50.5"

Blade

Number: 4

Shape: propeller

Material: Stainless steel

Pitch:

Clearance: 0.3"

Shutter

Material: Aluminum

of Doors: 13 per column

of Columns: 2

Door Length: 26.8"

Location: intake

Other Attachments:

Discharge Cone 27" deep, 65" o.d., 50.5" i.d.

Motor

Make: GE

Model #: 5KCR48WNO139S

H.P.: 1.5

Amps: 18.2/9.1

Volts: 115/208-230

RPM: 1725

S.F.: 1.00

Drive

Drive Pulley Dia. Ak28

Axle Pulley Dia.: AL94

Housing

Material: fiberglass

Intake Area: 57.5"x 55.5"

Discharge Area: 50.5" dia

Depth: 30" top
16" bottom

Guards

Description: Wire

Spacing: 2.1" concentric

Location: exhaust

TEST RESULTS

ACME DDPS50K-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98169	0.00	516	27500	20.8
Fan description:	0.05	516	26500	18.9
50" Belt drive 1.5 hp GE 5KCR48WN0139S	0.10	515	25300	17.3
motor, fiberglass housing, aluminum shutter,	0.15	514	24000	15.8
guard and discharge cone	0.20	514	22700	14.6
	0.25	513	20700	12.9
	0.30	511	18700	11.4
